--49. Method for the production of components or of their intermediate products, in which the component, in the process of being produced, as a structural member is subjected to:

(a) a treatment process and next

(b) several of the structural members are simultaneously subjected to a common CVD process under conditions of ultrahigh vacuum,

characterized in that the treatment process is a vacuum process and from it the structural members are supplied to the CVD process under vacuum.

50. Method for the production of components or of their intermediate products according to characteristic (b) of the preamble of claim 49, wherein the structural members are disk-form, characterized in that they are subjected horizontally to the CVD process under conditions of ultrahigh vacuum.

51. Method as claimed in claim 49, characterized in that the structural members are disk-form and are subjected horizontally to the treatment process as well as also to the CVD process and are also transported horizontally from the treatment process into the CVD process.

52. Method as claimed in claim 49, characterized in that the structural members between a cleaning process preceding the CVD process and the CVD process remain under vacuum.

53. Method as claimed in claim 49, characterized in that the structural members are disk-form and are subjected positioned horizontally and vertically stacked one above the other to the CVD process simultaneously.

54. Method as claimed in claim 53, characterized in that the structural members are stacked through individual transport for the CVD process and/or are again unstacked from the CVD process.

55. Method as claimed in claim 49, characterized in that the structural members are subjected to two or more treatment operations, wherein the CVD process is one of the operations, and that the structural members are transported under vacuum successively from one operation to the other along an at least piece-wise linear and/or circular segment-form transport paths.

56. Method as claimed in claim 49, characterized in that the structural members before and/or after the CVD process are subjected to a reactive, low-energy plasma-enhanced treatment process with an ion energy E at the surface of the particular structural member to be treated of

$$0 \text{ eV} < E \leq 15 \text{ eV}.$$

57. Method as claimed in claim 56, characterized in that the structural members, before the treatment in the CVD process, are subjected to a low-energy plasma-enhanced reactive cleaning, preferably in an atmosphere comprising hydrogen and/or nitrogen.

58. Method as claimed in claim 49, characterized in that during the loading and/or unloading of a reaction volume with structural members to be treated there with a CVD process under conditions of UHV, in the reaction volume a gas flow, preferably of a gas with hydrogen, is maintained.

59. Method as claimed in claim 49, characterized in that the average temperature and the temperature distribution in a reaction volume of the CVD process are measured and controlled, preferably are measured and regulated.

60. Method as claimed in claim 49, characterized in that the average temperature and preferably the temperature distribution is measured and controlled, preferably measured and regulated, at the structural members themselves during the CVD process.

61. Method as claimed in claim 49, characterized in that a reaction volume, in which the CVD process is being carried out, is heated by means of heating elements which are disposed *in vacuo* within a recipient encompassing the reaction volume.

62. Method as claimed in claim 49, characterized in that a reaction volume for the CVD process is first evacuated to ultrahigh vacuum, subsequently by allowing a process gas or process gas mixture to flow into the reaction volume the total pressure therein is increased up to the process pressure, wherein the reaction volume is encompassed by a vacuum with a total pressure in the range of, preferably lower than, the process pressure.

63. Method as claimed in claim 61, characterized in that the reaction volume and the vacuum encompassing it are each pumped differently.

64. Method as claimed in claim 61, characterized in that the reaction volume and the vacuum encompassing it are provided in a recipient disposed outside at ambient atmosphere, and that the reaction volume for loading and/or unloading with structural members communicates via the vacuum encompassing the reaction volume with a loading/unloading opening of the recipient.

65. Method as claimed in claim 49, characterized in that, after structural members are introduced into a reaction volume for the CVD process, these are supplied to their thermal equilibrium while allowing a gas to flow into the reaction volume, preferably with hydrogen and/or with a process gas or process gas mixture.

66. Method for the production of components or of their intermediate products, in which several components in the process of production are subjected simultaneously as structural members to a common CVD process under conditions of ultrahigh vacuum, and the structural members are heated by means of heating elements, characterized in that the heating elements are operated under vacuum.

67. Method as claimed in claim 66, characterized in that the structural members for the CVD process are retained on a support and the heating elements, preferably assigned one each to structural members, are provided on supports.

68. Method preferably as claimed in claim 66, characterized in that the structural members during the CVD process are retained on a support and that, preferably one each assigned to the structural members, thermal sensors are provided on the support.

69. Vacuum treatment installation with an ultrahigh vacuum CVD reactor, wherein a support for several structural members to be treated simultaneously in the reactor is provided, with the reactor comprising at least one loading/unloading opening, characterized in that the at least one loading/unloading opening communicates with a vacuum transport chamber for structural members.

70. Ultrahigh vacuum CVD reactor with a support for several disk-form structural members to be treated simultaneously in the reactor, characterized in that the support is developed for receiving the structural members in their horizontal position and stacked vertically.

B

71. Vacuum treatment installation as claimed in claim 69 for the treatment of disk-form structural members, characterized in that a support is developed in the reactor for receiving the structural members in their horizontal position and stacked vertically.

72. Vacuum treatment installation as claimed in claim 69, characterized in that the vacuum transport chamber comprises a transport configuration, which transports single structural members or several of the structural members individually, therein disk-form structural members preferably in the horizontal position.

73. Vacuum treatment installation as claimed in claim 69, characterized in that the vacuum transport chamber communicates with one or several further vacuum process chambers from the following group: lock chambers, coating chambers, cleaning chambers, etching chambers, UHV-CVD treatment chambers, conditioning chambers such as heating chambers, intermediate storage chambers, and implantation chambers.

A cont

74. Vacuum treatment installation as claimed in claim 73, characterized in that in the vacuum transport chamber a transport configuration is provided which is rotationally movably driven about an axis of rotation.

B

75. Vacuum treatment installation as claimed in claim 73, characterized in that in the vacuum transport chamber a transport configuration is provided, which comprises at least one driven, linearly movable part.

76. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 69, characterized in that a reaction recipient encompasses the reaction volume and a reactor recipient, at least sectionally spaced apart from the reaction recipient, encompasses the latter, wherein the reaction recipient as as also the reactor recipient have each a pump connection.

77. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 76, characterized in that the pumping connection on the reaction recipient has a significantly greater pumping cross section than the pumping connection on the reactor recipient and that both pumping connection are carried to the same pump configuration.

78. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 76, characterized in that the reactor recipient is operationally connected with a cooling configuration.

79. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 78, characterized in that the wall of the reactor recipient is developed at least sectionally as a double wall and the cooling configuration is disposed in the interspace of the double wall.

80. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 76, characterized in that the reactor recipient comprises at least one loading/unloading opening for components and the reaction recipient is divided into two recipient portions, motor driven to be movable with respect to one another, which can be motor-driven jointly toward the recipient or can be separated toward the opening of the recipient, wherein the partition line of the two portions in the joined state is aligned toward the loading/unloading opening.

81. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 80, characterized in that the loading/unloading opening is directed horizontally and the partition line of the two portions when joined extends also horizontally over a substantial section of its lengths which faces the loading/unloading opening.

82. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 81, characterized in that on one of the two portions of the reaction recipient a support for a multiplicity of disk-form structural members is fastened with a multiplicity of receivers, each for at least one disk-form structural member in horizontal orientation and stacked in the direction of the relative motion of the reaction recipient portions such that through the relative motion of the portions under control in each instance one of the receivers is aligned toward the loading/unloading opening.

83. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 80, characterized in that the portions can be separated through a linear relative motion or can be joined again.

84. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 80, characterized in that one of the two separable portions of the reaction recipient is mounted stationarily on the reactor recipient.

85. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 80, characterized in that in the reaction recipient terminates a gas supply configuration from a gas tank configuration with a process gas, and that at least the inner face of the reaction recipient wall comprises a material, preferably of graphite, which is resistant to the process gas brought to a predetermined process temperature.

86. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 80, characterized in that between reaction recipient and reactor recipient a heating configuration is disposed.

A cont

87. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 86, characterized in that between the heating configuration and interior volume of the reaction recipient a heat diffusor configuration is provided.

B

88. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 80, characterized in that in the reaction recipient a support for a multiplicity of structural members is provided and that on the support at least one, preferably several, thermal sensors are disposed.

89. Vacuum treatment installation or UHV-CVD reactor as claimed in claim 88, characterized in that the at least one thermal sensor is an instantaneous value acquisition unit of a temperature regulating circuit and that a heating configuration is provided as its setting member between reactor recipient and reaction recipient and/or within the reaction recipient, preferably at least in part also on the support.

90. UHV-CVD reactor with a support for several structural members, characterized in that on the support at least one thermal sensor is provided.

91. UHV-CVD reactor as claimed in claim 90, characterized in that on the support at least one heating element is provided.

92. UHV-CVD reactor as claimed in claim 91, characterized in that the at least one thermal sensor is the instantaneous value acquisition unit of a temperature regulating circuit for the support.

93. UHV-CVD reactor as claimed ~~in~~ claim 89, characterized in that the support has several receivers each for a structural member, and that the at least one thermoelement is disposed on one of the receivers such that it is thermally closely coupled with a component received thereon.

94. Method as claimed in claim 49, characterized in that in the CVD process an atomic layer deposition (ALD) is carried out.

95. Method as claimed in claim 49, characterized in that in the CVD process a deep trenches layer deposition is carried out.

96. Method as claimed in claim 49, characterized in that in the CVD process an epitactic layer deposition is carried out. –